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Page 2 [Supplemental Amendment to Applicants' March 7, 2001 Under 37 C.F.R.

§1.115 (In Response To The September 7, 2000 Office Action

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AMEND THE ABOVE-IDENTIFIED APPLICATION AS FOLLOWS:

In The Title:

Change the title of the invention to:

-- Composition of Matter Comprising Plurality of Substrate Surfaces
and Solid Support Comprising An Array of Substrate Surfaces For
Nucleic Acid Analyses and Applications, And Other Compositions
and Systems Employing Non-Radioactive Chemically Labeled
Oligonucleotides or Polynucleotides -- .

In The Claims:

Amend claims 975 and 1029 as follows:

975. (Amended) The [solid support] composition of claim 956, wherein one strand of said double-stranded oligonucleotide or polynucleotide or a sequence therefrom comprises a nucleic acid sequence complementary to a nucleic acid sequence of interest or sought to be quantified.

1029. (Amended) The system of claim [1029] 1028, wherein said siliceous matter comprises glass or a glass-coated surface.

Add new claims 1111-1265 as follows:

-- 1111. (NEW) A composition of matter comprising a plurality of substrate surfaces, each substrate surface comprising at least one double-stranded nucleic acid fixed or immobilized thereto, wherein at least one nucleic acid strand or a sequence therefrom comprises one or more non-radioactive chemical labels which comprise a non-radioactive signaling moiety or moieties which are quantifiable or detectable, and wherein at least one nucleic acid strand or a sequence therefrom in one of said substrate surfaces is different from at least one other nucleic acid strand or a sequence therefrom in another substrate surface. --

-- 1112. (NEW) The composition of matter of claim 1111, wherein said substrate surfaces or surface is selected from the group consisting of a porous substrate surface and a non-porous substrate surface. --

-- 1113. (NEW) The composition of matter of claim 1112, wherein said porous substrate surface comprises a porous polymeric material. --

-- 1114. (NEW) The composition of matter of claim 1113, wherein said porous polymeric material is selected from the group consisting of dextran and nitrocellulose. --

-- 1115. (NEW) The composition of matter of claim 1113, wherein said porous polymeric material comprises porous glass. --

-- 1116. (NEW) The composition of matter of claim 1112, wherein said non-porous substrate surface is selected from the group consisting of siliceous matter and non-porous polymeric material. --

-- 1117. (NEW) The composition of matter of claim 1116, wherein said siliceous matter comprises glass or a glass-coated surface. --

-- 1118. (NEW) The composition of matter of claim 1117, wherein said glass or glass-coated surface is selected from the group consisting of plates, wells, depressions, tubes, cuvettes and a collection or set of said plates, wells, depressions, tubes or cuvettes. --

-- 1119. (NEW) The composition of matter of claim 1118, wherein said wells comprise microtiter wells. --

-- 1120. (NEW) The composition of matter of claim 1116, wherein said non-porous polymeric material comprises a plastic or plastic-coated surface. --

-- 1121. (NEW) The composition of matter of claim 1120, wherein said plastic or plastic-coated surface is selected from the group consisting of polyethylene, polypropylene, polystyrene and polyepoxide. --

-- 1122. (NEW) The composition of matter of claim 1120, wherein said plastic or plastic-coated surface is selected from the group consisting of plates, wells, depressions, tubes, cuvettes and a collection or set of said plates, wells, depressions, tubes or cuvettes. --

-- 1123. (NEW) The composition of matter of claim 1122, wherein said wells comprise microtiter wells. --

-- 1124. (NEW) The composition of matter of claim 1111, wherein said substrate surface or surfaces have been treated with a surface treatment agent. --

-- 1125. (NEW) The composition of matter of claim 1124, wherein said surface treatment agent is selected from the group consisting of an amine compound and an epoxy compound. --

-- 1126. (NEW) The composition of matter of claim 1125, wherein said surface treatment agent comprises an amine compound. --

-- 1127. (NEW) The composition of matter of claim 1126, wherein said amine compound is selected from the group consisting of duodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate and a combination of any of the foregoing. --

-- 1128. (NEW) The composition of matter of claim 1125, wherein said surface treatment agent comprises an epoxy compound. --

-- 1129. (NEW) The composition of matter of claim 1111, wherein said at least one nucleic acid strand or a sequence therefrom has been fixed or immobilized to said substrate surface or surfaces by a means selected from the group consisting of an amine compound and an epoxy compound. --

-- 1130. (NEW) The composition of matter of claim 1111, wherein said at least one nucleic acid strand or a sequence therefrom has been fixed or immobilized directly or indirectly to said substrate surface or surfaces. --

-- 1131. (NEW) The composition of matter of claim 1111, wherein one strand of each of said double-stranded nucleic acid strands is fixed or immobilized directly or indirectly to said substrate surface or surfaces. --

-- 1132. (NEW) The composition of matter of claim 1111, wherein said double-stranded nucleic acid strands are fixed or immobilized to said substrate surfaces by sandwich hybridization. --

-- 1133. (NEW) The composition of matter of claim 1111, wherein said nucleic acid strands are selected from the group consisting of single-stranded nucleic acid, double-stranded nucleic acid and partially double-stranded nucleic acid. --

-- 1134. (NEW) The composition of matter of claim 1111, wherein said nucleic acid strands are selected from the group consisting of DNA, RNA and a DNA-RNA hybrid. --

-- 1135. (NEW) The composition of matter of claim 1111, wherein said at least one nucleic acid strand or a sequence therefrom comprises a nucleic acid sequence complementary to a nucleic acid sequence of interest or sought to be identified or quantified or sequenced. --

-- 1136. (NEW) The composition of matter of claim 1135, wherein said nucleic acid sequence of interest or sought to be identified or quantified or sequenced comprises a member selected from the group consisting of a gene or gene sequence, a pathogen or pathogenic sequence, an oncogene, and a combination of any of the foregoing. --

-- 1137. (NEW) The composition of matter of claim 1136, wherein any of said members comprises a mutation selected from the group consisting of a deletion, an insertion, an inversion, a point mutation, and a combination of any of the foregoing. --

-- 1138. (NEW) The composition of matter of claim 1135, wherein said complementary nucleic acid sequence or sequences are unlabeled. --

-- 1139. (NEW) The composition of matter of claim 1111, wherein said non-radioactive chemical label or labels are the non-radioactive signaling moiety or moieties. --

-- 1140. (NEW) The composition of matter of claim 1111, wherein said non-radioactive chemical label or labels comprise a non-radioactive signaling moiety or moieties which are quantifiable in or from a fluid or solution or in or through said composition of matter or said substrate surfaces or a system or collection or set containing said substrate surfaces, said quantity being proportional to the amount or quantity of said label or labels. --

-- 1141. (NEW) The composition of matter of claim 1139, wherein said non-radioactive chemical label or labels comprise a non-radioactive signaling moiety or moieties which are quantifiable in or from a fluid or solution or in or through said composition of matter or said substrate surfaces or a system or collection or set containing said substrate surfaces, said quantity being proportional to the amount or quantity of said label or labels. --

-- 1142. (NEW) The composition of matter of claim 1111, wherein said non-radioactive chemical label or labels are attached covalently to said at least one nucleic acid strand or a sequence therefrom. --

-- 1143. (NEW) The composition of matter of claim 1139, wherein said non-radioactive chemical label or labels are attached covalently to said at least one nucleic acid strand or a sequence therefrom. --

-- 1144. (NEW) The composition of matter of claim 1111, wherein said non-radioactive chemical label or labels are attached directly or indirectly to said at least one nucleic acid strand or a sequence therefrom. --

-- 1145. (NEW) The composition of matter of claim 1139, wherein said non-radioactive chemical label or labels are attached directly or indirectly to said at least one nucleic acid strand or a sequence therefrom. --

-- 1146. (NEW) The composition of matter of claim 1144, wherein said direct or indirect attachment is through one or more nucleotides in said at least one nucleic acid strand or a sequence therefrom. --

-- 1147. (NEW) The composition of matter of claim 1145, wherein said direct or indirect attachment is through one or more nucleotides in said at least one nucleic acid strand or a sequence therefrom. --

-- 1148. (NEW) The composition of matter of claim 1146, wherein said attachment is indirectly through a bridging entity or a formation of a complex. --

-- 1149. (NEW) The composition of matter of claim 1147, wherein said attachment is indirectly through a bridging entity or a formation of a complex. --

-- 1150. (NEW) The composition of matter of claim 1148, wherein said bridging entity or complex is covalently or non-covalently attached. --

-- 1151. (NEW) The composition of matter of claim 1149, wherein said bridging entity or complex is covalently or non-covalently attached. --

-- 1152. (NEW) The composition of matter of claim 1150, wherein said bridging entity or complex is selected from the group consisting of biotin and avidin, biotin and streptavidin, a sugar and a lectin, and an antigen and an antibody. --

-- 1153. (NEW) The composition of matter of claim 1151, wherein said bridging entity or complex is selected from the group consisting of biotin and avidin, biotin and streptavidin, a sugar and a lectin, and an antigen and an antibody. --

-- 1154. (NEW) The composition of matter of claim 1111, wherein said non-radioactive signaling moiety or moieties of said non-radioactive chemical label or labels are covalently or non-covalently attached thereto. --

-- 1155. (NEW) The composition of matter of claim 1111, wherein said non-radioactive signaling moiety or moieties of said non-radioactive chemical label or labels are directly attached thereto. --

-- 1156. (NEW) The composition of matter of claim 1111, wherein said non-radioactive signaling moiety or moieties of said non-radioactive chemical label or labels are indirectly attached thereto. --

-- 1157. (NEW) The composition of matter of claim 1111, wherein said non-radioactive chemical label or labels comprise indicator molecules. --

-- 1158. (NEW) The composition of matter of claim 1157, wherein said indicator molecules are selected from the group consisting of a chromagenic compound, a fluorescent compound, a chemiluminescent compound and a combination of any of the foregoing. --

-- 1159. (NEW) The composition of matter of claim 1139, wherein said non-radioactive chemical label or labels comprise indicator molecules. --

-- 1160. (NEW) The composition of matter of claim 1159, wherein said indicator molecules are selected from the group consisting of a chromagenic compound, a fluorescent compound, a chemiluminescent compound and a combination of any of the foregoing. --

-- 1161. (NEW) The composition of matter of claim 1111, wherein a quantifiable or detectable non-radioactive signal is generated or generatable directly or indirectly from said non-radioactive signaling moiety or moieties. --

-- 1162. (NEW) The composition of matter of claim 1139, wherein a quantifiable or detectable non-radioactive signal is generated or generatable directly or indirectly from said non-radioactive chemical label or labels. --

-- 1163. (NEW) The composition of matter of 1111, wherein said non-radioactive signaling moiety or moieties are directly produced. --

-- 1164. (NEW) The composition of matter of claim 1163, wherein said directly produced non-radioactive signaling moiety or moieties comprise a member selected from the group consisting of a chromagen, a fluorogen and chemiluminescent compound. --

-- 1165. (NEW) The composition of matter of 1111, wherein said non-radioactive signaling moiety or moieties are indirectly produced. --

-- 1166. (NEW) The composition of matter of claim 1165, wherein said non-radioactive signaling moiety or moieties are indirectly produced by an enzyme or enzymatic reaction. --

-- 1167. (NEW) The composition of matter of claim 1166, wherein said enzyme is selected from the group consisting of alkaline phosphatase, acid phosphatase, peroxidase, β -D-galactosidase and glucose oxidase. --

-- 1168. (NEW) The composition of matter of 1139, wherein said non-radioactive signaling moiety or moieties are directly produced. --

-- 1169. (NEW) The composition of matter of claim 1168, wherein said directly produced non-radioactive signaling moiety or moieties comprise a member selected from the group consisting of a chromagen, a fluorogen and chemiluminescent compound. --

-- 1170. (NEW) The composition of matter of 1139, wherein said non-radioactive signaling moiety or moieties are indirectly produced. --

-- 1171. (NEW) The composition of matter of claim 1170, wherein said non-radioactive signaling moiety or moieties are indirectly produced by an enzyme or enzymatic reaction. --

-- 1172. (NEW) The composition of matter of claim 1171, wherein said enzyme is selected from the group consisting of alkaline phosphatase, acid phosphatase, peroxidase, β -D-galactosidase and glucose oxidase. --

-- 1173. (NEW) The composition of matter of claim 1111, wherein said non-radioactive signaling moiety or moieties are selected from the group consisting of an enzyme, a co-enzyme, a chelating compound, a chromagenic compound, a fluorescent compound and a chemiluminescent compound. --

-- 1174. (NEW) The composition of matter of claim 1139, wherein said non-radioactive signaling moiety or moieties are selected from the group consisting of an enzyme, a co-enzyme, a chelating compound, a chromagen compound, a fluorescent compound and a chemiluminescent compound. --

-- 1175. (NEW) The composition of matter of claim 1111, wherein a non-radioactive signal is generated or generatable from said non-radioactive chemical label or labels by a means selected from the group consisting of chromagenic means, fluorescent means and chemiluminescent means. --

-- 1176. (NEW) The composition of matter of claim 1139, wherein a non-radioactive signal is generated or generatable from said non-radioactive chemical label or labels by a means selected from the group consisting of chromagenic means, fluorescent means and chemiluminescent means. --

-- 1177. (NEW) The composition of matter of claim 1111, wherein said non-radioactive chemical label or labels are selected from the group consisting of a colored compound, a chemiluminescent compound and a fluorescent compound. --

-- 1178. (NEW) The composition of matter of claim 1139, wherein said non-radioactive chemical label or labels are selected from the group consisting of a colored compound, a chemiluminescent compound and a fluorescent compound. --

-- 1179. (NEW) The composition of matter of claim 1178, wherein said colored compound comprises a dye. --

-- 1180. (NEW) The composition of matter of claim 1178, wherein said colored compound comprises a dye. --

-- 1181. (NEW) The composition of matter of claim 1111, wherein a non-radioactive signal from said non-radioactive signaling moiety or moieties is quantifiable or detectable by photometric means. --

-- 1182. (NEW) The composition of matter of claim 1139, wherein a non-radioactive signal from said non-radioactive signaling moiety or moieties is quantifiable or detectable by photometric means. --

-- 1183. (NEW) The composition of matter of claim 1181, wherein said photometric means are selected from the group consisting of photometric techniques, spectrophotometric techniques, colorimetric techniques, fluorometric techniques and chemiluminescent techniques. --

-- 1184. (NEW) The composition of matter of claim 1182, wherein said photometric means are selected from the group consisting of photometric techniques, spectrophotometric techniques, colorimetric techniques, fluorometric techniques and chemiluminescent techniques. --

-- 1185. (NEW) The composition of matter of claim 1111, wherein said substrate surface is transparent or translucent. --

-- 1186. (NEW) The composition of matter of claim 1112, wherein said substrate surface is transparent or translucent. --

-- 1187. (NEW) A collection or set comprising the substrate surfaces of any of claims 1111 to 1186. --

-- 1188. (NEW) A collection or set comprising the substrate surfaces of claim 1111, wherein said substrate surfaces are porous. --

-- 1189. (NEW) A collection or set comprising the substrate surfaces of claim 1111, wherein said substrate surfaces are non-porous. --

-- 1190. (NEW) The collection or set of claim 1189, wherein said non-porous substrate surfaces are transparent or translucent. --

-- 1191. (NEW) A non-porous system for retaining or containing a fluid or solution, which system comprises the substrate surfaces of any of claims 1111-1186. --

-- 1192. (NEW) A non-porous system for retaining or containing a fluid or solution, which system comprises a collection or set of any of the substrate surfaces of claims 1111-1186. --

-- 1193. (NEW) A composition of matter comprising a plurality of non-porous substrate surfaces, each non-porous substrate surface comprising at least one nucleic acid strand fixed or immobilized thereto, and wherein at least one nucleic acid strand or a sequence therefrom in one of said non-porous substrate surfaces is different from at least one other nucleic acid strand or a sequence therefrom in another non-porous substrate surface. --

-- 1194. (NEW) The composition of matter of claim 1193, wherein said non-porous substrate surface or surfaces are selected from the group consisting of siliceous matter and non-porous polymeric material. --

-- 1195. (NEW) The composition of matter of claim 1194, wherein said siliceous matter comprises glass or a glass-coated surface. --

-- 1196. (NEW) The composition of matter of claim 1195, wherein said glass or glass-coated surface is selected from the group consisting of plates, wells, depressions, tubes, cuvettes and a collection or set of said plates, wells, depressions, tubes or cuvettes. --

-- 1197. (NEW) The composition of matter of claim 1196, wherein said wells comprise microtiter wells. --

-- 1198. (NEW) The composition of matter of claim 1194, wherein said non-porous polymeric material comprises a plastic or plastic-coated surface. --

-- 1199. (NEW) The composition of matter of claim 1198, wherein said plastic or plastic-coated surface is selected from the group consisting of polyethylene, polypropylene, polystyrene and polyepoxide. --

-- 1200. (NEW) The composition of matter of claim 1198, wherein said plastic or plastic-coated surface is selected from the group consisting of plates, wells, depressions, tubes, cuvettes and a collection of said plates, wells, depressions, tubes or cuvettes. --

-- 1201. (NEW) The composition of matter of claim 1200, wherein said wells comprise microtiter wells. --

-- 1202. (NEW) The composition of matter of claim 1193, wherein said non-porous substrate surface or surfaces have been treated with a surface treatment agent. --

-- 1203. (NEW) The composition of matter of claim 1202, wherein said surface treatment agent is selected from the group consisting of an amine compound and an epoxy compound. --

-- 1204. (NEW) The composition of matter of claim 1203, wherein said surface treatment agent comprises an amine compound. --

-- 1205. (NEW) The composition of matter of claim 1204, wherein said amine compound is selected from the group consisting of duodecadiamine (DDA), polylysine (PPL), γ -aminopropyltriethoxysilane, ammonium acetate and a combination of any of the foregoing. --

-- 1206. (NEW) The composition of matter of claim 1203, wherein said surface treatment agent comprises an epoxy compound. --

-- 1207. (NEW) The composition of matter of claim 1193, wherein said at least one nucleic acid strand or a sequence therefrom has been fixed or immobilized to said non-porous substrate surface or surfaces by a means selected from the group consisting of an amine compound and an epoxy compound. --

-- 1208. (NEW) The composition of matter of claim 1193, wherein said at least one nucleic acid strand or a sequence therefrom has been fixed or immobilized directly or indirectly to said non-porous substrate surface or surfaces. --

-- 1209. (NEW) The composition of matter of claim 1193, wherein said nucleic acid strands are selected from the group consisting of single-stranded nucleic acid and partially double-stranded nucleic acid. --

-- 1210. (NEW) The composition of matter of claim 1193, wherein said nucleic acid strands are selected from the group consisting of DNA and RNA. --

-- 1211. (NEW) The composition of matter of claim 1193, wherein said at least one nucleic acid strand or a sequence therefrom comprises a nucleic acid sequence complementary to a nucleic acid sequence of interest or sought to be identified or quantified or sequenced. --

-- 1212. (NEW) The composition of matter of claim 1211, wherein said nucleic acid sequence of interest or sought to be identified or quantified or sequenced comprises a member selected from the group consisting of a gene or gene sequence, a pathogen or pathogenic sequence, an oncogene, and a combination of any of the foregoing. --

-- 1213. (NEW) The composition of matter of claim 1212, wherein any of said members comprises a mutation selected from the group consisting of a deletion, an insertion, an inversion, a point mutation, and a combination of any of the foregoing. --

-- 1214. (NEW) The composition of matter of claim 1211, wherein said nucleic acid sequence of interest or sought to be identified or quantified or sequenced comprises one or more non-radioactive chemical labels which comprise a non-radioactive signaling moiety or moieties which are quantifiable or detectable. --

-- 1215. (NEW) The composition of matter of claim 1214, wherein said non-radioactive chemical label or labels are the non-radioactive signaling moiety or moieties. --

-- 1216. (NEW) The composition of matter of claim 1214, wherein said non-radioactive chemical label or labels comprise a non-radioactive signaling moiety or moieties which are quantifiable in or from a fluid or solution or in or through said composition of matter or said non-porous substrate surfaces or a system or collection or set containing said non-porous substrate surfaces, said quantity being proportional to the amount or quantity of said label or labels. --

-- 1217. (NEW) The composition of matter of claim 1215, wherein said non-radioactive chemical label or labels comprise a non-radioactive signaling moiety or moieties which are quantifiable in or from a fluid or solution or in or through said composition of matter or said non-porous substrate surfaces or a system or collection or set containing said non-porous substrate surfaces, said quantity being proportional to the amount or quantity of said label or labels. --

-- 1218. (NEW) The composition of matter of claim 1214, wherein said non-radioactive chemical label or labels are attached covalently to said at least one nucleic acid strand or a sequence therefrom. --

-- 1219. (NEW) The composition of matter of claim 1215, wherein said non-radioactive chemical label or labels are attached covalently to said at least one nucleic acid strand or a sequence therefrom. --

-- 1220. (NEW) The composition of matter of claim 1214, wherein said non-radioactive chemical label or labels are attached directly or indirectly to said at least one nucleic acid strand or a sequence therefrom. --

-- 1221. (NEW) The composition of matter of claim 1215, wherein said non-radioactive chemical label or labels are attached directly or indirectly to said at least one nucleic acid strand or a sequence therefrom. --

-- 1222. (NEW) The composition of matter of claim 1220, wherein said direct or indirect attachment is through one or more nucleotides in said at least one nucleic acid strand or a sequence therefrom. --

- 1223. (NEW) The composition of matter of claim 1221, wherein said direct or indirect attachment is through one or more nucleotides in said at least one nucleic acid strand or a sequence therefrom. --
- 1224. (NEW) The composition of matter of claim 1222, wherein said attachment is indirectly through a bridging entity or a formation of a complex. --
- 1225. (NEW) The composition of matter of claim 1223, wherein said attachment is indirectly through a bridging entity or a formation of a complex. --
- 1226. (NEW) The composition of matter of claim 1224, wherein said bridging entity or complex is covalently or non-covalently attached. --
- 1227. (NEW) The composition of matter of claim 1225, wherein said bridging entity or complex is covalently or non-covalently attached. --
- 1228. (NEW) The composition of matter of claim 1226, wherein said bridging entity or complex is selected from the group consisting of biotin and avidin, biotin and streptavidin, a sugar and a lectin, and an antigen and an antibody. --
- 1229. (NEW) The composition of matter of claim 1227, wherein said bridging entity or complex is selected from the group consisting of biotin and avidin, biotin and streptavidin, a sugar and a lectin, and an antigen and an antibody. --
- 1230. (NEW) The composition of matter of claim 1214, wherein said non-radioactive signaling moiety or moieties of said non-radioactive chemical label or labels are covalently or non-covalently attached thereto. --
- 1231. (NEW) The composition of matter of claim 1214, wherein said non-radioactive signaling moiety or moieties of said non-radioactive chemical label or labels are directly attached thereto. --
- 1232. (NEW) The composition of matter of claim 1214, wherein said non-radioactive signaling moiety or moieties of said non-radioactive chemical label or labels are indirectly attached thereto. --

-- 1233. (NEW) The composition of matter of claim 1214, wherein said non-radioactive chemical label or labels comprise indicator molecules. --

-- 1234. (NEW) The composition of matter of claim 1233, wherein said indicator molecules are selected from the group consisting of a chromagenic compound, a fluorescent compound, a chemiluminescent compound and a combination of any of the foregoing. --

-- 1235. (NEW) The composition of matter of claim 1215, wherein said non-radioactive chemical label or labels comprise indicator molecules. --

-- 1236. (NEW) The composition of matter of claim 1235, wherein said indicator molecules are selected from the group consisting of a chromagenic compound, a fluorescent compound, a chemiluminescent compound and a combination of any of the foregoing. --

-- 1237. (NEW) The composition of matter of claim 1214, wherein a quantifiable or detectable non-radioactive signal is generated or generatable directly or indirectly from said non-radioactive signaling moiety or moieties. --

-- 1238. (NEW) The composition of matter of claim 1215, wherein a quantifiable or detectable non-radioactive signal is generated or generatable directly or indirectly from said non-radioactive chemical label or labels. --

-- 1239. (NEW) The composition of matter of 1214, wherein said non-radioactive signaling moiety or moieties are directly produced. --

-- 1240. (NEW) The composition of matter of claim 1239, wherein said directly produced non-radioactive signaling moiety or moieties comprise a member selected from the group consisting of a chromagen, a fluorogen and chemiluminescent compound. --

-- 1241. (NEW) The composition of matter of 1214, wherein said non-radioactive signaling moiety or moieties are indirectly produced. --

-- 1242. (NEW) The composition of matter of claim 1241, wherein said non-radioactive signaling moiety or moieties are indirectly produced by an enzyme or enzymatic reaction. --

-- 1243. (NEW) The composition of matter of claim 1242, wherein said enzyme is selected from the group consisting of alkaline phosphatase, acid phosphatase, peroxidase, β -D-galactosidase and glucose oxidase. --

-- 1244. (NEW) The composition of matter of 1215, wherein said non-radioactive signaling moiety or moieties are directly produced. --

-- 1245. (NEW) The composition of matter of claim 1244, wherein said directly produced non-radioactive signaling moiety or moieties comprise a member selected from the group consisting of a chromagen, a fluorogen and chemiluminescent compound. --

-- 1246. (NEW) The composition of matter of 1215, wherein said non-radioactive signaling moiety or moieties are indirectly produced. --

-- 1247. (NEW) The composition of matter of claim 1246, wherein said non-radioactive signaling moiety or moieties are indirectly produced by an enzyme or enzymatic reaction. --

-- 1248. (NEW) The composition of matter of claim 1247, wherein said enzyme is selected from the group consisting of alkaline phosphatase, acid phosphatase, peroxidase, β -D-galactosidase and glucose oxidase. --

-- 1249. (NEW) The composition of matter of claim 1214, wherein said non-radioactive signaling moiety or moieties are selected from the group consisting of an enzyme, a co-enzyme, a chelating compound, a chromagenic compound, a fluorescent compound and a chemiluminescent compound. --

-- 1250. (NEW) The composition of matter of claim 1215, wherein said non-radioactive signaling moiety or moieties are selected from the group consisting of an enzyme, a co-enzyme, a chelating compound, a chromagen compound, a fluorescent compound and a chemiluminescent compound. --

-- 1251. (NEW) The composition of matter of claim 1214, wherein a non-radioactive signal is generated or generatable from said non-radioactive chemical label or labels by a means selected from the group consisting of chromagenic means, fluorescent means and chemiluminescent means. --

-- 1252. (NEW) The composition of matter of claim 1215, wherein a non-radioactive signal is generated or generatable from said non-radioactive chemical label or labels by a means selected from the group consisting of chromagenic means, fluorescent means and chemiluminescent means. --

-- 1253. (NEW) The composition of matter of claim 1214, wherein said non-radioactive chemical label or labels are selected from the group consisting of a colored compound, a chemiluminescent compound and a fluorescent compound. --

-- 1254. (NEW) The composition of matter of claim 1215, wherein said non-radioactive chemical label or labels are selected from the group consisting of a colored compound, a chemiluminescent compound and a fluorescent compound. --

-- 1255. (NEW) The composition of matter of claim 1253, wherein said colored compound comprises a dye. --

-- 1256. (NEW) The composition of matter of claim 1254, wherein said colored compound comprises a dye. --

-- 1257. (NEW) The composition of matter of claim 1214, wherein a non-radioactive signal from said non-radioactive signaling moiety or moieties is quantifiable or detectable by photometric means. --

-- 1258. (NEW) The composition of matter of claim 1215, wherein a non-radioactive signal from said non-radioactive chemical label or labels is quantifiable or detectable by photometric means. --

-- 1259. (NEW) The composition of matter of claim 1257, wherein said photometric means are selected from the group consisting of photometric techniques, spectrophotometric techniques, colorimetric techniques, fluorometric techniques and chemiluminescent techniques. --

-- 1260. (NEW) The composition of matter of claim 1258, wherein said photometric means are selected from the group consisting of photometric techniques, spectrophotometric techniques, colorimetric techniques, fluorometric techniques and chemiluminescent techniques. --

-- 1261. (NEW) The composition of matter of claim 1193, wherein said non-porous substrate surface or surfaces are transparent or translucent. --

-- 1262. (NEW) A collection or set comprising the non-porous substrate surfaces of any of claims 1193 to 1261. --

-- 1263. (NEW) A collection or set comprising the non-porous substrate surfaces of claim 1193, wherein said non-porous substrate surfaces are transparent or translucent. --

-- 1264. (NEW) A non-porous system for retaining or containing a fluid or solution, which system comprises the non-porous substrate surfaces of any of claims 1193-1261. --

-- 1265. (NEW) A non-porous system for retaining or containing a fluid or solution, which system comprises a collection or set of any of the non-porous substrate surfaces of claims 1193-1261. --

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